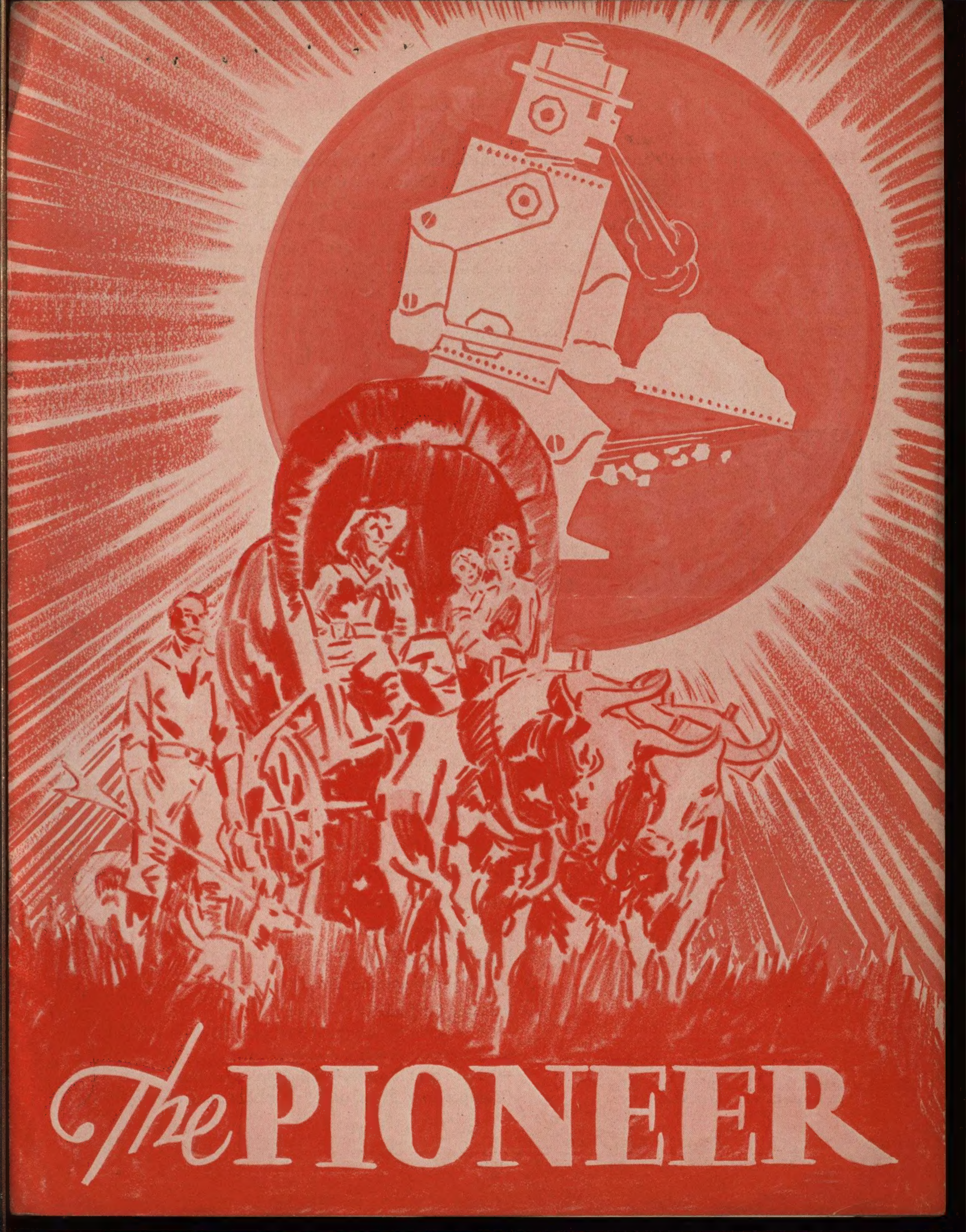
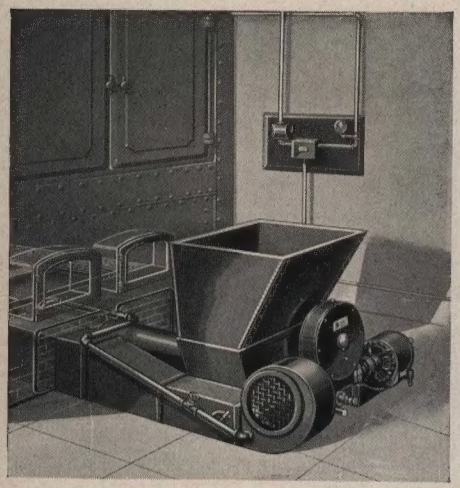


The PIONEER

IRON FIREMAN...a good machine ma

The Iron Fireman Manufacturing Company is the pioneer and the largest manufacturer in its field. Three modern plants located in Portland, Oregon, Cleveland, Ohio and Toronto, Canada, are devoted exclusively to the manufacture of automatic coal burners. Year after year Iron Fireman has utilized the full power of extensive research facilities and engineering skill to better its product. Study the comparisons given below. Note the superiority of the present Iron Fireman over the models of previous years. And bear in mind that the Iron Fireman of 1927 and 1929 were not only distinctly superior to other stokers of their day, but are not unlike many machines that are offered at the present time . . . Check the 1931 Iron Fireman point by point. Satisfy yourself that Iron Fireman is the finest machine manufactured in the small stoker industry.

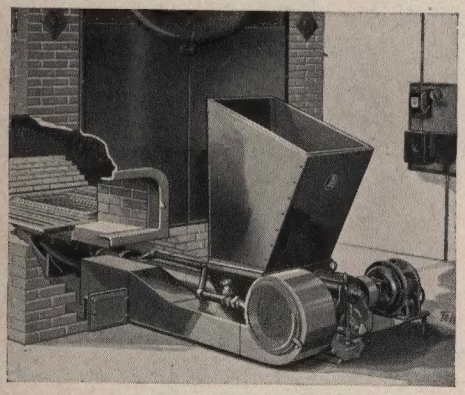
1927



FEATURES OF CONSTRUCTION

1 Ratchet feed
2 Cast iron construction
3 Feed worm cast from two-piece pattern
4 One piece retort
5 Open type, flat top hopper
6 Hopper and air duct of light sheet metal
7 Open fan intake
8 Exposed motor
9 Taper shear pin

1929



FEATURES OF CONSTRUCTION

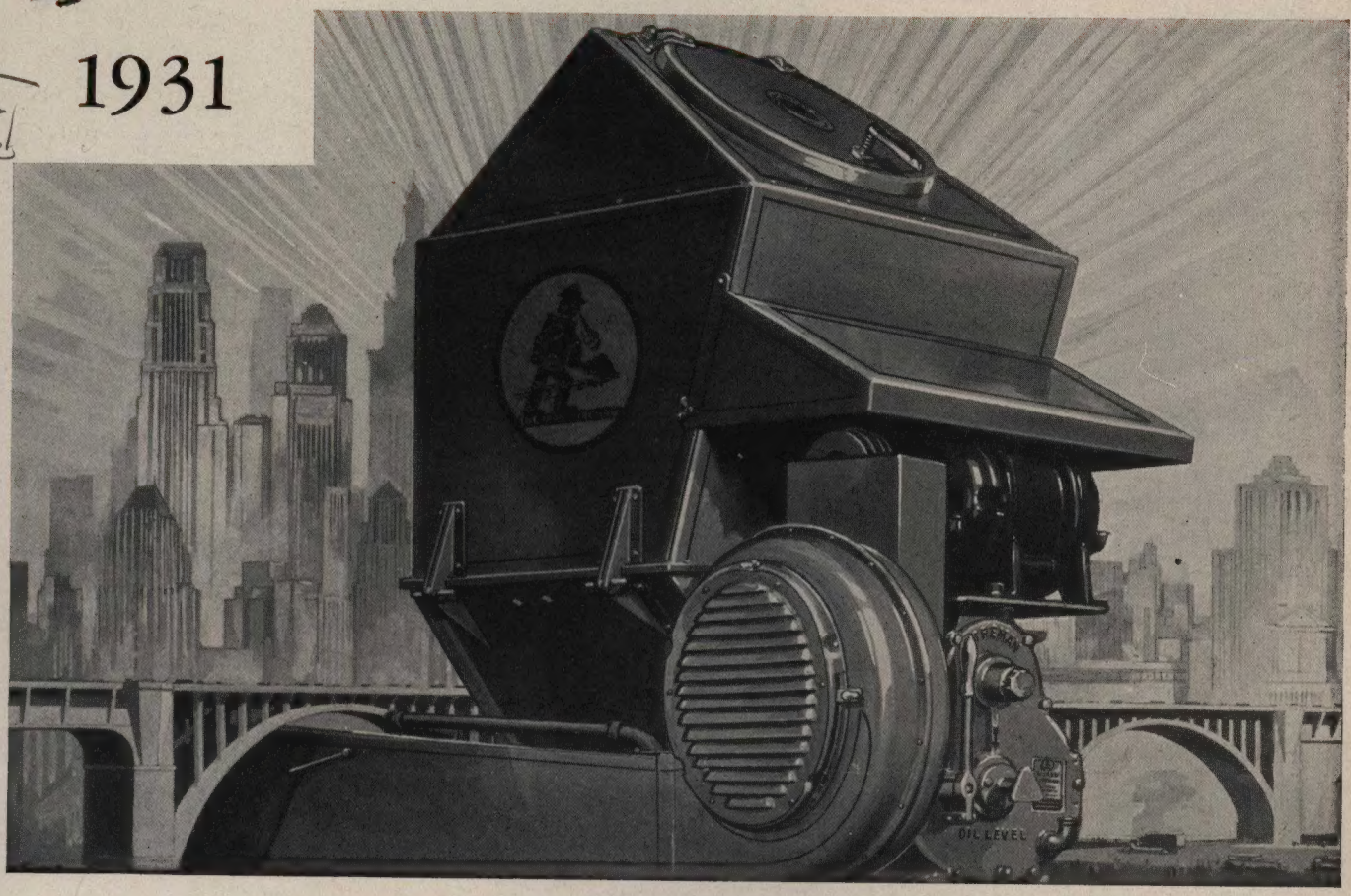
1 Continuous feed transmission
2 Feed worm of special alloy steel from one-piece pattern
3 Sectional retort
4 Open type, slanting top hopper
5 Heavy copper bearing, rust-resisting sheet metal hopper
6 Iris shutter fan intake
7 Direct motor drive
8 Easily removable shear pin cap
9 Dust-tight connection from gear case to hopper base
10 Increased capacities (average)
—30 per cent greater coal feed per hour
—75 per cent larger capacity hopper
—30 per cent increased radiation capacities
(Comparisons based on 1927 model machines)

IRON FIREMAN AUTOMATIC COAL BURNER
The Machine that made Coal an Automatic Fuel

OUTSTANDING LEADERSHIP IN DESIGN, C

ade better by constant improvements

1931



FEATURES OF CONSTRUCTION

1 Pressed steel construction

2 Continuous feed transmission

3 Easily removable shear pin cap

4 Improved heavy flight feed worm

5 Feed worm of special alloy steel, cast from one-piece pattern

6 Sectional retort

7 New enclosed type pressed steel hopper

8 Hopper design patented by Iron Fireman

9 Tight connection to hopper base

10 Hinged hopper

11 Agitator

12 Convenient clean-out door in hopper base

13 Dust-tight connection from gear case to hopper base

14 Iris diaphragmatic shutter on fan intake

15 Automatic air cut-off in air duct

16 Duplex belt drive

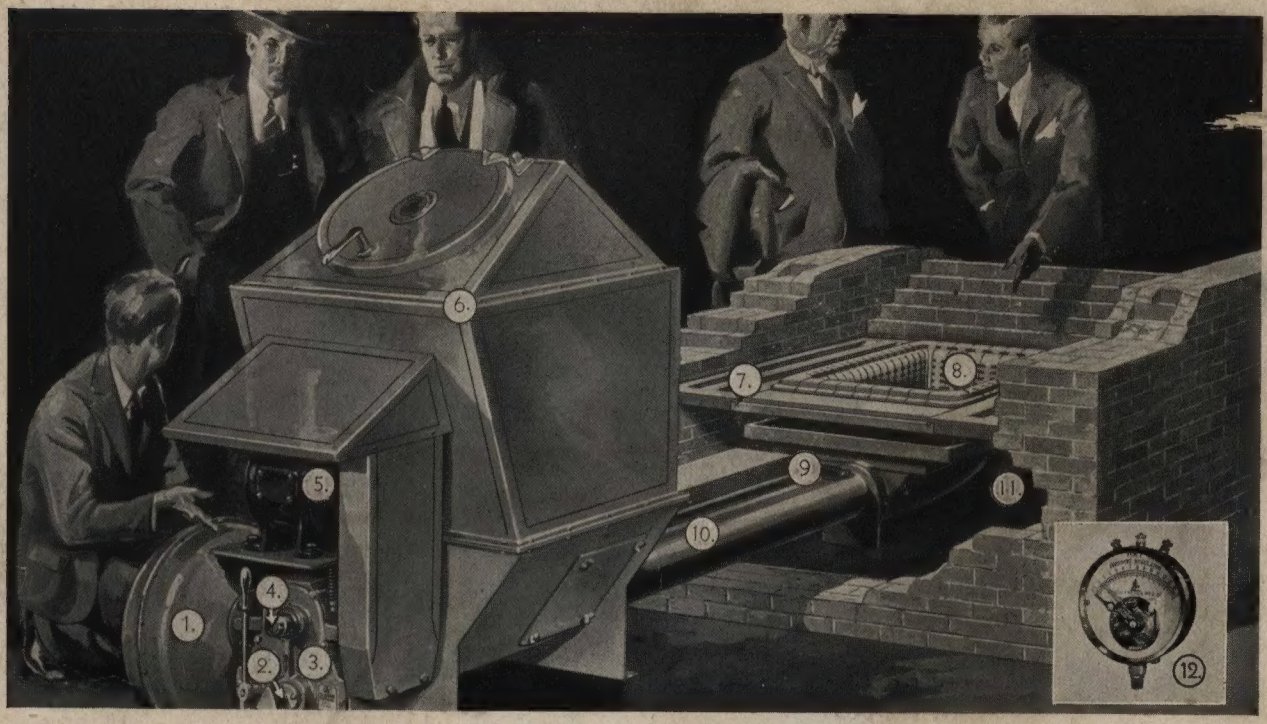
17 Motor mounted on rubber insulated cushions over gear case

18 Protective motor hood

19 Beautiful in appearance

20 Increased capacities (average)
—30 per cent greater coal feed per hour
—75 per cent larger capacity hoppers
—30 per cent increased radiation capacities
(Comparisons based on 1927 model machines)

ONSTRUCTION, PERFORMANCE AND VALUE



IRON FIREMAN . . . *the machine that made coal an automatic fuel*

IRON FIREMAN feeds coal to the fire *from below*—the scientific way. The candle test illustrates this principle. Turn a lighted candle upside down. The flame melts the wax and turns it into gas faster than it can be burned. It smokes. It wastes fuel. The same condition occurs in hand firing, when coal is thrown on top of the fire.

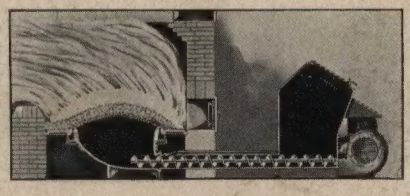
Turn the candle right side up. Now the flame melts the wax and turns it into gas just as fast as it can be burned—no faster. Smoke ceases. There is no fuel waste. In the same way Iron Fireman creates a smokeless fire and eliminates fuel waste.

Fill the Iron Fireman hopper with the smaller sizes of good coal, which cost far less per ton. From the bottom of the hopper the feed worm carries this coal into the retort and to the fire *from below*. At the same time, the Iron Fireman centrifugal fan is creating a forced draft. As the coal approaches the fire and becomes hot it gives up its gases. These gases mix with the air supplied by the fan and burn like any good gas. As the coal continues into the fire it continues to give off its gases steadily, evenly. By the time the coal reaches the firebed of live coals, nothing but carbon and ash remains. The carbon is completely consumed. The ash falls away and fuses into a clinker, easily removed. Iron Fireman creates firebox temperatures of 2500 to 3500 degrees. Hand firing rarely creates a firebox temperature over 2000 degrees.

The operation of Iron Fireman is controlled by instruments which automatically maintain any desired home or building temperature, or any desired steam pressure in high or low pressure boilers, as well as controlling water temperatures in hot water systems.

The automatic electric controls used with the Iron Fireman include many exclusive and highly desirable features. The dual thermostat is readily adjustable to day and night temperatures. The Syncrostat, with electric Telechron clock movement, is an accurate timekeeper and automatically shifts from day to night temperature and back to day temperature, without winding or setting. Incorporated in it, is a positive device which keeps the fire constantly alive during periods of mild weather.

1. Quiet ball bearing fan supplying forced draft to fire.
2. Gear shift for transmission. Three speeds and neutral.
3. Continuous feed transmission. Gears run in bath of oil.
4. Safety shear pin—protects mechanism from damage.
5. Electric motor—standard make.
6. Coal hopper—heavy copper bearing sheet steel.
7. Dead plates made of heavy iron and ribbed.
8. Sectional tuyere blocks of iron through which air is supplied to the fire.
9. Auxiliary air duct. Insures positive movement of all gases through the fire.
10. Steel housing enclosing feed worm.
11. Wind box. Equalizes air supply—cools retort tuyeres and dead plates.
12. Automatic electric controls include specially designed thermostats, pressure regulators and other instruments for all types of installations, obtainable exclusively with Iron Fireman.



Iron Fireman achieves these results for users:

Saves fuel costs—burns cheaper coal and less of it.

Prevents smoke.

Saves labor costs.

Automatically maintains steady, even heat or boiler pressure.

Iron Fireman users, *on an average*, save more than 30 per cent of their former fuel costs. This figure is from actual operating records supplied by a representative list of users in 41 states and 15 different types of buildings, industries and homes. Other savings and betterments and increases in production yield Iron Fireman users an extra profit often amounting to as much as, or more than, the fuel savings!

Iron Fireman Manufacturing Company, Portland, Oregon. Factories in Portland, Cleveland and Toronto, Canada. Sales branches and subsidiaries: New York, Chicago, St. Louis, Milwaukee. Dealers everywhere.